CLAIMS

1. In a method of producing a ductile alloy having a base metal by casting a molten stream as a spray of droplets onto a surface; the improvement residing in: selecting a corrosion resisting material as a component of the alloy exclusively limited thereto with the base metal for deposit onto said surface; and utilizing nitrogen as a cover gas for mixing of said component with the base metal and for atomization of the molten stream to endow the ductile alloy with high strength upon said casting thereof onto the surface.

2. The method as defined in claim 1, wherein said base metal is nickel and the corrosion resisting material is chromium.

3. In a method of producing an alloy with improved strength exclusively formed from nickel and chromium mixed under cover of an inert gas, by casting of a molten alloy stream onto a surface, the improvement residing in: selecting nitrogen as the inert gas; pressurizing said inert gas for atomization of the molten alloy stream into spray droplets; and directing jets of the pressurized inert gas into said molten alloy stream for effecting said atomization and deposit onto the surface.

4. In a method of producing an alloy from a base metal and a corrosion-resisting component respectively exhibiting high strength and high ductility properties, the improvement residing in: limiting the alloy exclusively to said base metal and the corrosion-resisting component; and forming the alloy by spray casting under exposure to nitrogen gas.